

NE' EXICO OIL CONSERVATION COMMS
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

1-7 file
Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3/1/78			
Company Petroleum Development Corp				Connection El Paso Natural Gas Co.		MAR - 9 1978	
Pool <i>Willcat Wolfcamp</i> Undesignated				Formation Wolfcamp		Unit O.C.C. ARTESIA, OFFICE	
Completion Date 3/1/78		Total Depth 9550		Plug Back TD 7300		Elevation 4273KB	
Farm or Lease Name Mahun Federal				Well No. 1			
Csg. Size 4 1/2"	Wt. 11.6#	d 4.000	Set At 7341	Perforations: From 7006 To 7034		Unit Sec. Twp. Rye. I 27 21S 22E	
Thq. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 7034	Perforations: From 7006 To 7034			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 6960		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 139 @ 6950		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State New Mexico							
L 7006	H 7006	Gg 0.705	% CO ₂ 0.25	% N ₂ 2.55	% H ₂ S --	Prover 4"	Meter Run Flg.
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Duration of Flow
1.	4		1"	491	58	92	1 1/2 hrs.
2.	4		1"	491	30	88	1 hr.
3.	4		1"	491	15	86	1 hr.
4.	4		1"	491	6	85	1 hr.
5.							
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	4.753	171.0	504.2	.9706	1.191	1.047	984
2	4.753	123.0	504.2	.9741	1.191	1.049	711
3	4.753	87.0	504.2	.9759	1.191	1.049	504
4	4.753	55.0	504.2	.9768	1.191	1.049	319
5							
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 125 Mcf/bbl.		
1	0.76	552	1.44	0.912	A.P.I. Gravity of Liquid Hydrocarbons 54		
2	0.76	548	1.42	0.908	Specific Gravity Separator Gas 0.705		
3	0.76	546	1.42	0.908	Specific Gravity Flowing Fluid X X X X X		
4	0.76	545	1.42	0.908	Critical Pressure 664 P.S.I.A.		
5					Critical Temperature 385 °R		
NO.	P _c	P _w	P _c ²	P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.003$		
1	1642	1231	2696	1515	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.003$		
2		1162		1350			
3		1162		1350			
4		1203		1447			
5							
Absolute Open Flow 1424 Mcfd @ 15.025				Angle of Slope θ 45°		Slope, n 1.00	
Remarks: Amerada BHP gauge at 6950. Flowed at highest rate first to unload accumulated fluid. BHP not stabilized at end of flow period #1. BHP stabilized during periods #2, #3 & #4.							
Approved By Commission:		Conducted By: Charles W. Sanders		Calculated By: Charles W. Sanders		Checked By: J. C. Johnson	